

I claim:

1. An optical system for providing a useful light beam, comprising

at least one optical component which attenuates a useful light fraction with a first linear polarization state less strongly than a useful light fraction with a second linear polarization state different from the first linear polarization state, and

a compensation unit having a transmission plate which is introduced into the useful light beam path inclined to the plane perpendicular to the optical axis by a prescribed angle of inclination, and attenuates the useful light fraction with the first linear polarization state more strongly than the useful light fraction with the second linear polarization state.

2. The optical system according to Claim 1, wherein the transmission plate comprises a transparent plane plate with a transmitting coating which attenuates the useful light fraction with the first linear polarization state to an extent dependent on an incidence angle of the light more strongly than the useful light fraction with the second linear polarization state.

3. The optical system according to Claim 1, further comprising at least one deflecting mirror, wherein at least one of an angle of inclination and a transmitting coating of the transmission plate is selected as a function of a magnitude of an imbalance, caused by the at least one deflecting mirror, of the intensity of the two useful light fractions.

4. The optical system according to Claim 3, further comprising a measuring device for determining the polarization degree downstream of the at least one deflecting mirror, wherein the at least one of the angle of inclination and the coating of the transmission plate is set as a function of the intensity, measured by the measuring device, of the two useful light fractions.

5. The optical system according to Claim 3, further comprising an imaging system, wherein the transmission plate and the at least one deflecting mirror is arranged in planes of the imaging system that are at least approximately conjugate to one another.

6. The optical system according to Claim 3, wherein the coating is applied to the transmission plate variably depending on location as a function of an incidence angle distribution of the useful light incident on the deflecting mirror.

7. The optical system according to Claim 1, configured as an imaging system, wherein the compensation unit comprises a further transmission plate, which is introduced into the useful light beam path with reference to the plane perpendicular to the optical axis and inclined by an angle of inclination which is opposite to the prescribed angle of inclination of the first transmission plate.